

Quarter 1 Topics:

1) Limits

- graphically
- algebraically
- End behavior (Degrees of $\frac{\text{Top}}{\text{Bottom}}$)

2) Limit Definition of Derivative

$$f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$$

3) Derivative Rules

- Power
- Product
- Quotient
- Chain
- $\ln x$
- e^x

4) Writing Equations of Tangent line

- Point (comes from function)
- Slope (comes from Derivative)
- $y - y_c = m(x - x_c)$

5) Higher Order Derivatives

- Derivatives of Derivatives